Patented Sept. 13, 1949

2,481,877

UNITED STATES PATENT OFFICE

2,481,877

HINGE

Russell I. Rhodes, North Attleboro, Mass., assignor to The Mason Box Company, Attleboro Falls, Mass., a corporation of Massachusetts

Application November 22, 1944, Serial No. 564,567

5 Claims. (Cl. 16—128)

1

This invention relates to jewelry boxes and the like and to metallic hinges for such boxes, and more particularly to boxes made of cardboard or other sheet material having comparatively little strength and rigidity.

Objects of the present invention are to provide a construction in which the parts of the hinges may be completely formed and assembled together before the hinge is applied to the box, in which the box need not be perforated or otherwise weakened for the purpose of mounting the hinged parts thereon, in which the parts may be manufactured and assembled economically and in which the construction is reliable and durable in use.

In one aspect the present invention involves a box comprising top and bottom parts having back walls and sheet-metal hinges mounted on the parts respectively for pivotally interconnecting them together, each hinge having a flange folded back to form a channel into which the edge of one of said back walls fits, one hinge having perforations at the folded edge of its channel and the flange of the other hinge being cut to form tongues extending through the perforations. Preferably the slots extend lengthwise along the folded edge of one channel and the tongues of the other channel after passing through the slots extend across the channel and thence along the far side of the associated back wall, thereby to lock the tongues in place.

In the preferred embodiment the side of the tongue channel opposite to the side from which the tongues are cut has openings to receive the tongues when they are bent across the channel, whereby the tongues do not obstruct the channel. While the openings may be in the form of recesses or depressions they preferably extend through the sheet-metal in the form of cut-outs.

In the preferred embodiment each hinge also has a flange extending inwardly along the inside of the top or bottom of the box so that the strains imposed upon the box by the hinge will be distributed to the top and bottom walls of the box instead of being confined to the back walls.

In another aspect the invention involves hinges constructed as aforesaid for ready attachment to boxes merely by sliding the edges of the box parts into the aforesaid channels.

For the purpose of illustration a typical embodiment of the invention is shown in the accompanying drawings in which

Fig. 1 is a plan view of the hinge blanks;

Fig. 2 is a perspective view of the two parts of the hinge formed ready for interconnection together;

2

Fig. 3 is a similar view showing the parts interconnected ready for application to the box;

Fig. 4 is a rear view of a box with the hinge applied thereto;

Fig. 5 is a section on line 5—5 of Fig. 4;

Fig. 6 is a section on line 6—6 of Fig. 4 showing the cover of the box in open position;

Fig. 7 is a plan view of a modified blank;

Fig. 8 is a section of the modified hinge parts as they are shaped and interconnected ready to be interlocked; and

Fig. 9 is a section like Fig. 5 of the modification showing the hinge parts interlocked together and mounted on the box parts.

The particular embodiment of the invention chosen for the purpose of illustration comprises a box formed in upper and lower parts 1 and 2 and a hinge formed in two parts 3 and 4 for attachment to the upper and lower parts of the box respectively. The blank for the upper part comprises two tongues 6 formed by slots 7 at one end of the blank and a transverse slot 8 intermediate the ends of the blank. The blank for the lower part of the hinge comprises two pairs of parallel slots 11 in line with the tongues 6 and another transverse slot 12 in line with the slot 8. After the blanks are cut as aforesaid they are bent at 13 and 14 and folded at 16 and 17 into the shapes shown in Fig. 2, the tongues 6 being folded only part way so as to extend obliquely and being bent along transverse lines 18 intermediate their ends so that the free ends of the tongues lie parallel to the opposed bases of the hinges after the tongues are completely folded into position. The lower blank is folded transversely intermediate the slots of the pairs 11 so that the two slots of each pair are opposed to each other adjacent the edge of the hinge as shown in Fig. 2. With the parts thus shaped the tongues 6 are inserted through the slots 11 and then completely folded into the positions shown in Fig. 3 where the free ends lie against the opposed faces of the hinge as shown in Figs. 3 and 5. With the hinge parts thus shaped the box parts are slipped into the grooves of the hinge parts as shown in Figs. 4, 5 and 6. In this connection it will be noted that the tongues 6 extend along the inside of the box whereas the marginal portion of the hinge from which the tongues are cut extend along the outside of the box. Thus the tongues are locked in folded position by the box itself. For the purpose of adding rigidity to the box structure the hinges are preferably provided with right-angle flanges 21 and 22 which extend along the inner faces of the upper and lower parts of